

# TEC WIRING REGULATION & BY-LAWS

1. TONGA ELECTRICITY ACT 2007
2. CONTRACTORS BY-LAWS & WIRING BY-LAWS
3. WIRING STANDARDS AS/NZS 3000:2007 (WIRING RULES)

# ELECTRICITY ACT 2007

Enforced by Electricity Commission with core function of Regulating Electricity in the Kingdom.

- Electricity Price (Tarrif)
- Power Generation (Concession Contract, PPA )
- Electrical Wiring and Installation Standards (AS/NZS 3000)
- Electrical Safety Policies and Regulation
- Electrical Contractor Licensing ( Exams & Issue of Licenses)
- Authorization of Public Safety Electrical Inspection.

## BY-LAWS

- Despite the abolition of the Tonga Electric Power Board in 2008, By-Laws made under the authority of the TEPB Act remain in full force and effect [TEPB Repeal Act 2007, section 2(2)(b)] and are policed by the Electricity Commission. Accordingly the public safety oversight regime in respect of ELECTRICAL WORKS continues to be regulated by the Electrical Contractor By-Laws 1985 supplemented by revised TEPB practices brought into force in 2005, and by the Electricity Commission after July 2008.

- **2 Registration**

- (1) Any person with the minimum qualification of a valid overseas registration as an electrician or electrical engineer and sufficient experience in the electrical field to the satisfaction of the Board, may apply to the Manager for registration as an electrical contractor for a period of one year. The year shall commence on the first day of January and end on the 31st day of December.
- (2) The holder of an Electrical Trade Certificate from a recognised institution with a minimum of 10 years experience in the installation and repair of electrical equipment, machinery, appliances, house wiring and other related devices and gadgets satisfactory to the Board, may, upon passing an examination to be laid down by the Board, apply for registration as an electrical contractor.

### 3 Application

- Application for registration as an Electrical Contractor must be supported by documentary evidence of the applicant's qualification, overseas registration and experiences. The Board may require further submission and additional information about the provisions regulating the applicant's overseas registration to determine the scope of electrical wiring work he is entitled to carry out on registration.

## 4 Certificate

- If the Board approves the application, it shall, upon payment of the annual registration fee of \$10.00, issue a registration certificate as in Form 1 of the Schedule to the applicant. This registration certificate shall be displayed at a prominent place in the principal place of business and may be renewed upon written application.

## 5 Electrical wiring permit required

- A person who is a holder of a valid registration certificate issued by the Board shall not make any electrical installation in any premises unless he has applied for and has been issued with an electrical wiring permit for the particular premises, subject to the terms and conditions stipulated. Application for a permit must be made on the official printed form as in Form 2 of the Schedule, obtainable from the E.C Office and signed by the registered electrical contractor. Electrical wiring plans complete with specifications shall be submitted together with the application.

## 6 The Permit

- An electrical wiring permit as in Form 1 of the Schedule, only for the particular installation applied for, shall be issued upon approval of the plans and specifications and payment of the required fee. The permit shall always be available at the premises whilst the installation is in progress and shall be shown to the Board's authorized inspector whenever required.



## 7 Additional Work

- No additional work or changes shall be made apart from the work stated on the permit. A new application shall be made for any addition or changes on the original application. If any addition or changes are made without prior approval the permit is liable to cancellation and the person issued with the permit shall be liable to a fine.

## 8 Contractor to Supervise

- Electrical wiring installation permitted on particular premises shall be at all times under the direct supervision of the electrical contractor.

## 9 Inspection

- No electrical wiring shall be concealed behind walls and above ceilings unless the Board's authorized inspector has inspected the installation.

# 10 Certificate of Completion (COC)

- Certificate of Completion (COC) is issued only after inspector is satisfied that the Electrical Installation Complies with Electrical Standard and is safe for Connection to grid.

## **WIRING STANDARD AS/NZS 3000:2007 (Wiring Rules)**

- The existing Electrical Wiring By-Laws made by TEPB on 30<sup>th</sup> April 1985 technically remain in force. However the Technical requirements thereof are outmoded and do not represent best safety or regulatory practice today. Indeed even TEPB from the start of this century adopted **de facto** as a safe Wiring Standard the **Joint Australian and New Zealand Wiring Code 3000:2000**, published in the year 2000. Inspectors employed by the Electricity Commission and virtually all licensed electricians in Tonga, have been trained in or sometimes practiced their trade in New Zealand or Australia.
- The current version of the **Wiring Standard is Wiring Code AS/NZS 3000:2007** PUBLISHED BY Standards New Zealand on 12<sup>th</sup> November 2007. This is the Standard with which all electrical works in Tonga now require to comply.

# PROCEDURE

Having thus set the scene, the detailed procedures in force concerning the Permit Regime are as set forth hereunder.

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- No. 1 Electrical Contractor Applies to the Commission for a Permit (Form 1) and lodges all Plans and Specifications which the Oversight Authority of the Commission shall require.
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- No. 2 A Fee Calculation is issued by the Commission to the Electrical Contractor (Form 2) and thereafter the Fee is paid and the Contractor is issued with a Commission Invoice (Form 3) and a Receipt.
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- No. 3 After review of the Application and supporting documents, if satisfied, the Oversight Authority issues a Permit (Form 4). The Permit may vary slightly if of a Temporary nature – this fact (and the expiry date) must be specified in the Permit. The Permit may be signed by either the Technical Manager or the Deputy Technical Manager.

- No. 4 The Electrical Contractor completes the electrical works and then advises the Commission in writing that he has done so and requests that the Commission inspect the electrical works.
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- No. 5 The Electrical Works are then inspected by the Oversight Authority and if any rectification is required this is detailed in the Inspector's Report (Form 5). When all works have been completed satisfactorily a Certificate of Completion (Form 6) is issued and may be signed by either the Technical Manager or the Deputy Technical Manager.
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- No. 5A Where the electrical works have been undertaken in the Niuas, Vava'u, Ha'apai or 'Eua (the Kingdoms' Outer Islands) where the Commission have no resident inspector, then on the Oversight Authority being advised by the contractor that the electrical works have been completed properly, a Temporary Connection Permission (Form 7) may be issued by the Technical Manager or the Deputy Technical Manager pending a formal inspection within 5 weeks and the issue of a Form 6 Certificate of Completion. This part of the Commission's procedures was introduced as from February 2011 after consultation with Tonga Power, to avoid inconvenience to electrical consumers living in the Outer Islands

**FORM – 1**  
**ELECTRICITY COMMISSION**  
*Tu'atākilangi, P.O. Box 47, Nuku'alofa, Kingdom of Tonga, Ph : 23-632*

**APPLICATION FOR PERMIT TO  
 CARRY OUT ELECTRICAL WORKS**

Name of Electrical Contractor : .....

Owner/Occupier of Premises : .....

Address of Premises : .....  
 (give full postal address and  
 adequate location details) .....

Type of Works ( Check as appropriate )	Nature of Works ( Check as appropriate )	After completion of these Works, Maximum Electricity Demand at the premises will be ..... kWh/day and ..... Amps. Distribution Line
Temporary (60 Days Limit) .....	New Premises .....	Overhead .....
Domestic .....	Addition to Premises .....	Underground .....
Commercial .....	Renovations .....	Phase .....
Industrial .....	Meter Alteration .....	Distance to nearest Pole/URD Box .....
Community .....	Others .....	
Reconnection .....	Single Phase .....	
	Three Phase .....	

the Electrical Contractor named above Certified that the information given above and overleaf, in the Plans and Diagrams lodge with Electricity Commission, and otherwise as supplied to Electricity Commission in respect of this Application are correct, and that a copy of this Application has been served on the Electricity Distribution Company.

Date : .....

Signature : .....

*See Overleaf for more Details*



**FORM – 6**

**ELECTRICITY COMMISSION**  
Tu'atākilangi, P.O. Box 47, Nuku'alofa, Kingdom of Tonga

**CERTIFICATE OF COMPLETION  
OF ELECTRICAL WORKS**

Under and in terms of the Electrical Contractor By-Laws 1985 made under the authority of the

Tonga Electric Power Board Act (as amended), and in respect of a report from

\_\_\_\_\_, the Electrical Contractor to whom an Electrical Wiring

**Permit Number 11649/18** was issued to undertake electrical works at premises located at **Kameli - Vavau** owned / occupied by **Fifita**

Now therefore I do hereby certify [1] that I have inspected said premises and [2] that the electrical

works authorized by said Permit have been completed in a satisfactory manner, in accordance with said Permit and the requirements of said By Laws.

Issued at Nuku'alofa, Kingdom of Tonga on the **18/12/2018** upon the authority of the Electricity Commission.

.....  
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Technical Manager/Deputy Technical  
Manager

*(This Certificate is issued in three original copies, 1 copy is retained by Electricity Commission, copy 2 is issued to the Electrical Contractor, and copy 3 is issued to Tonga Power Limited as authority to them to connect electrical power to the Premises named above).*